

IN THE CLAIMS:

Please cancel Claims 2 to 5 and 10 to 15 without prejudice or disclaimer of subject matter. Please incorporate the substance of allowable Claim 5 into independent Claim 1, as follows:

1. (Currently Amended) A frequency modulation apparatus comprising:

a segmentalizing device for dividing, into a plurality of segments in units of pixel, a main scan line on an image bearing member scanned by a laser beam;

an auxiliary clock calculation device for employing a reference clock period, and variable-magnification coefficients corresponding to the respective segments, to calculate auxiliary clock periods for the respective segments;

an image clock generating device for generating image clocks for the respective segments based on an initial predesignated period value and the auxiliary clock periods for the respective segments;

a reference value storing device for storing a reference value;

a detecting device for detecting a difference between the reference value and an actual laser irradiation location; and

a correcting device for correcting a shift in the laser irradiation location in accordance with the detection results obtained by the detecting device,

wherein the detecting device separates the segments into blocks of continuous segments, and detects a shift between a laser irradiation position based on a value predesignated for each of the blocks and an actual laser irradiation position; and

wherein, in accordance with the detection results obtained by the detecting device, the correcting device controls a pixel period of the segment, and corrects the shift of the laser irradiation position.

2. to 5. (Cancelled)

6. (Currently Amended) A frequency modulation apparatus according to ~~claim 5~~claim 1, wherein segment(s) fewer than the segments constituting each of the blocks are defined as segment(s) to be adjusted; and

wherein the correcting device controls the pixel period for the segment to be adjusted, and corrects an error for the laser irradiation position.

7. (Original) A frequency modulation apparatus according to claim 6, wherein the segment to be adjusted is the last segment for each of the blocks of the segments.

8. (Original) A frequency modulation apparatus according to claim 6, wherein, for each of the blocks, the same value is set for the segment(s) to be adjusted.

9. (Original) A frequency modulation apparatus according to claim 6, wherein an inflection point along an $f-\theta$ lens characteristic curve is employed to separate the segments into the blocks.

10. to 15. (Cancelled)